UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/733,578	12/08/2000	Marcus Lowell Munger	MG-00077	4431

7590	01/13/2004	EXAMINER

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EXAMINER
MAHMOUDI, HASSAN

ART UNIT	PAPER NUMBER
2175	

DATE MAILED: 01/13/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

		Application No.	Applicant(s)	
Office Action Summary		09/733,578	MUNGER, MARCUS LOWELL	
		Examiner	Art Unit	
		Tony Mahmoudi	2175	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) FROM
THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _15-December-2003_.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _2-8_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _2-8_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

    a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet 37 CFR 1.78.

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Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s).

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other:

DETAILED ACTION

Remarks

1. In response to communications filed on 15-December-2003, claim 2 is amended in line 7 per

applicant's request. Claims 2-8 are pending in the application.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

3. Claims 2-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drogin

(U.S. patent No. 4,851,854) in view of Duluk, Jr. et al (U.S. patent No. 5,574,835.)

As to claim 2, Drogin teaches a method of assigning identifying indicia to objects (see

column 3, line 61 through column 4, line 1, where "assigning identifying indicia" is read on

"values of first and second parameters") in multidimensional space (see column 1, lines 23-

26) comprising the steps of:

sorting objects initially according to a first dimension of their location in multi-

dimensional space (see Abstract, and see column 1, lines 6-19);

determining ambiguities among coordinate values of their location (see column 12, lines

35-42) in the multidimensional space according to whether separation of objects in a

dimension is less than a predetermined threshold value (see column 8, lines 12-25); and

grouping subsets of objects (see column 11, lines 50-57.)

Drogin does not teach:

grouping objects according to ambiguities in the objects; and

ordering ambiguous objects in subsets according to other dimensions of the

multidimensional space.

Duluk, Jr. et al teaches detection of hidden polygons in three-dimensional databases (see

Abstract), in which he teaches grouping objects according to ambiguities in the objects (see

column 16, lines 14-19, and see column 19, lines 24-33); and ordering ambiguous objects in

subsets according to other dimensions of the multidimensional space (see column 21, lines

10-27.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the

time the invention was made to have modified Drogin to include grouping objects according

to ambiguities in the objects; and ordering ambiguous objects in subsets according to other

dimensions of the multidimensional space.

It would have been obvious to a person having ordinary skill in the art at the time the

invention was made to have modified Drogin by the teachings of Duluk, Jr. et al because

grouping objects according to ambiguities in the objects; and ordering ambiguous objects in

subsets according to other dimensions of the multidimensional space, would allow objects

with ambiguous cluster allocation to be separated and treated as individual entities either

from the very beginning, or upon obtaining computational results.

As to claim 3, Drogin as modified teaches wherein the determining step includes the step

of ascertaining a predetermined threshold value based on known errors of position

measurements (see Drogin, column 6, lines 40-48, column 8, lines 20-25, and see column 10,

lines 1-7.)

As to claim 4, Drogin as modified teaches the method including an initial step of:

selecting as the first dimension of a multidimensional coordinate system that dimension

along which separation of objects exhibits the greatest dispersion (see Drogin, column 13,

lines 10-22.)

As to claim 5, Drogin as modified teaches wherein the grouping steps includes the step of

determining ambiguities among coordinate values according to whether separation of targets

is less than any of a plurality of predetermined threshold values (see Duluk, Jr. et al,

Abstract, and see column 21, lines 9-38.)

As to claim 8, Drogin teaches a method of sorting indicia corresponding to objects (see

Abstract, and see column 1, lines 6-19) moving through a multidimensional space (see

column 1, lines 23-26) comprising the steps of:

scanning the multidimensional space to detect positions of objects therein (see column 1,

lines 23-26, and see column 13, lines 10-22);

assigning unique indicia to each detected object (see column 3, line 61 through column 4,

line 1, where "assigning identifying indicia" is read on "values of first and second

parameters");

sorting assigned indicia along one coordinate axis of the multidimensional space (see

Abstract, and see column 1, lines 6-19);

grouping into subsets (see column 11, lines 50-57.)

For the remaining steps of this claim, applicant is kindly directed to remarks and

discussions made for claim 2 above.

4. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Drogin (U.S.

patent No. 4,851,854) in view of Duluk, Jr. et al (U.S. patent No. 5,574,835), as applied to

claims 2-5 and 8 above, and further in view of Miura et al (U.S. Patent No. 6,169,966.)

As to claim 6, Drogin as modified still does not teach wherein the determining step

includes the step of ascertaining a predetermined threshold value based on a maximum rate

of change of position of one target with respect to any other.

Miura et al teaches an apparatus for detecting a moving state of an object (see Abstract),

in which he teaches ascertaining a predetermined threshold value based on a maximum rate

of change of position of one target with respect to any other (see column 2, lines 17-38, and

see column 3, line 49 through column 4, line 64.)

Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified <u>Drogin</u> as modified to include ascertaining a predetermined threshold value based on a maximum rate of change of position of one target with respect to any other.

It would have been obvious to a person having ordinary skill in the art at the time the invention was made to have modified <u>Drogin</u> as modified, by the teaching of <u>Miura et al</u>, because ascertaining a predetermined threshold value based on a maximum rate of change of position of one target with respect to any other, would provide for the moving characteristic of the object to be determined by using the positional time-variations of the object, as taught by <u>Miura et al</u> (see column 2, lines 22-36.)

As to claim 7, <u>Drogin</u> as modified teaches wherein ascertaining one of the predetermined threshold values based on maximum rate of change of position of one object with respect to any other (see <u>Miura et al</u>, column 2, lines 17-38, and see column 3, line 49 through column 4, line 64); and

ascertaining another one of the predetermined threshold values based on the random errors of measurements in positions of the objects (see <u>Drogin</u>, column 6, lines 40-48, column 8, lines 20-25, and see column 10, lines 1-7.)

Response to Arguments

5. Applicant's arguments filed on 15-December-2003 with respect to the rejection of claims 2-8

in view of the cited references have been fully considered but are not found persuasive:

In response to applicant's arguments that "Duluk does not teach ordering of ambiguous

objects", the arguments have been fully considered but are not found persuasive, because

Duluk, Jr. et al teaches "categorizing" and "sorting" of ambiguous objects (see column 19,

lines 1-8, lines 24-33, and see column 21, lines 10-27.)

In response to applicant's arguments that "the reference does not show a 'determining

step' including the step of ascertaining a predetermined threshold value", the arguments have

been fully considered but are not found persuasive, because Drogin teaches the "determining

step" in "comparing the indicating data with a threshold level" (see column 8, lines 20-21),

and he teaches "predetermined threshold value" in "the thresholds are assigned small 'blob'

sizes" (see column 8, lines 21-22.)

In response to applicant's arguments that "no attempt is made to compute the dispersion

among any of the parameters", the arguments have been fully considered but are not found

persuasive, because "*computing* the dispersion of the parameters" is not recited in the

rejected claim. Although the claims are interpreted in light of the specification, limitations

from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26

USPQ2d 1057 (Fed. Cir. 1993). Nevertheless, Drogin teaches this "computing" in

"measuring at least first and second parameters of the received signals" (see column 13, lines 10-22).

In response to applicant's arguments that "there is no showing or suggestion by the examiner nor in the references themselves of the manner of combining the references", the arguments have been fully considered but are not found persuasive, because the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, "obviousness" is established in the knowledge generally available to one of ordinary skill in the art, to modify Drogin by the teachings of Duluk, Jr. et al because grouping objects according to ambiguities in the objects; and ordering ambiguous objects in subsets according to other dimensions of the multidimensional space, would allow objects with ambiguous cluster allocation to be separated and treated as individual entities either from the very beginning, or upon obtaining computational results; and further to modify Drogin as modified, by the teaching of Miura et al, because ascertaining a predetermined threshold value based on a maximum rate of change of position of one target with respect to any other, would provide for the moving characteristic of the object to be determined by using the positional time-variations of the object, as taught by Miura et al (see column 2, lines 22-36.)

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy

as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until

after the end of the THREE-MONTH shortened statutory period, then the shortened statutory

period will expire on the date the advisory action is mailed, and any extension fee pursuant to

37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the mailing

date of this final action.

7. Any inquiries concerning this communication or earlier communications from the examiner

should be directed to Tony Mahmoudi whose telephone number is (703) 305-4887. The

examiner can normally be reached on Mondays-Fridays from 08:00 am to 04:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Dov Popovici, can be reached at (703) 305-3830.

tm

January 2, 2004

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